

FIG. 1A

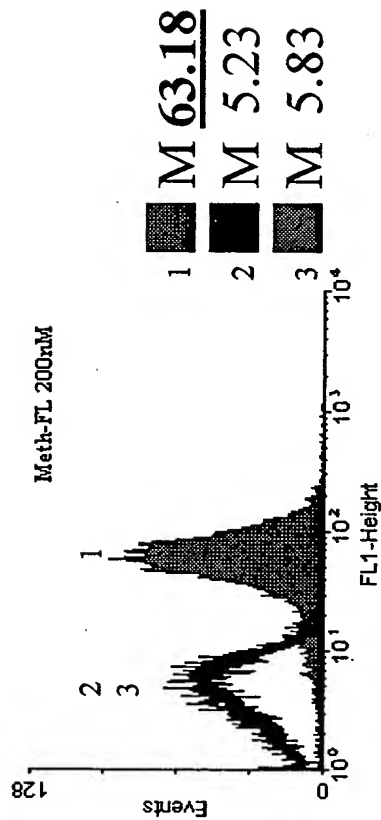


FIG. 1B

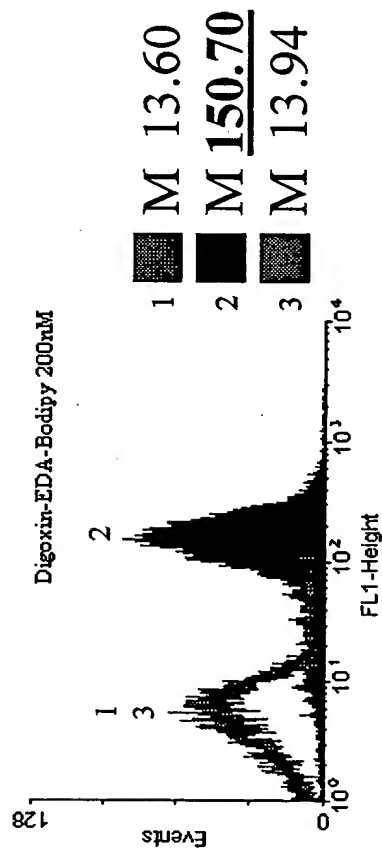
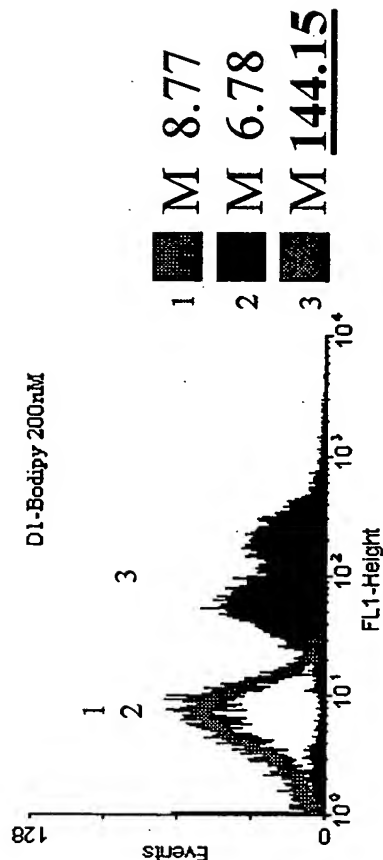


FIG. 1C

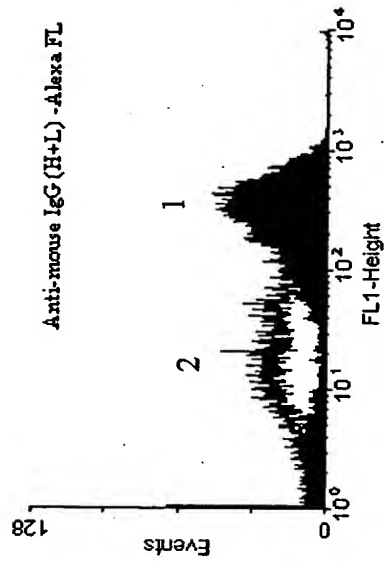


APEX expressed scFvs in *E. coli* represented by the following colors

- 1 Anti-MethAmp scFv
- 2 Anti-Digoxigenin scFv
- 3 Anti-peptide scFv

FIG. 2A

APEX expressed scFvs in *E. coli*  
represented by the following colors



1 Mouse derived scFv  
2 Human derived scFv

FIG. 2B

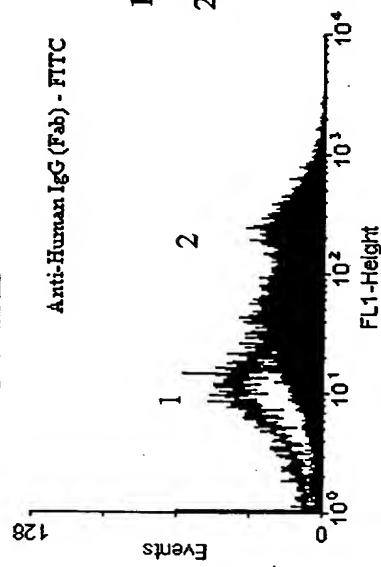
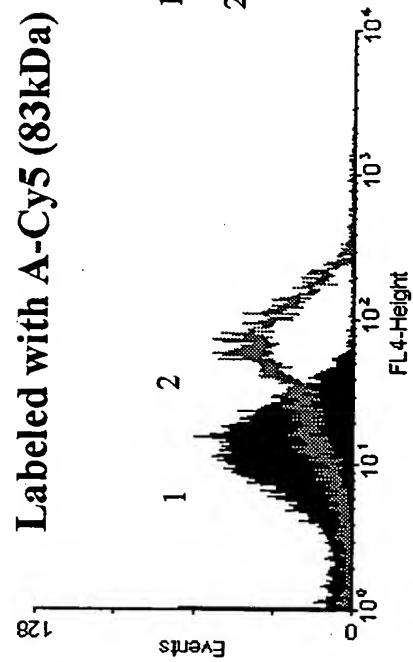


FIG. 3A



1 Anit-digoxigenin scFv  
2 Anti-PA scFv  
3 Anti-peptide scFv

FIG. 3B

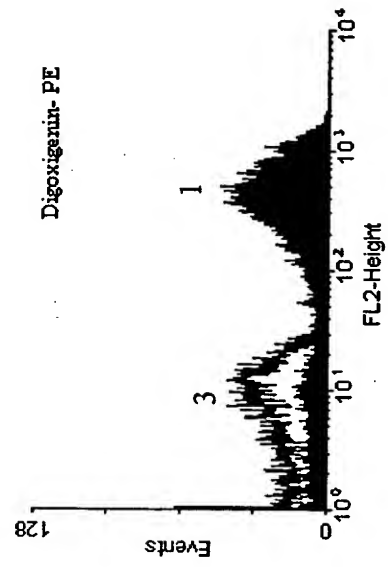


FIG. 4

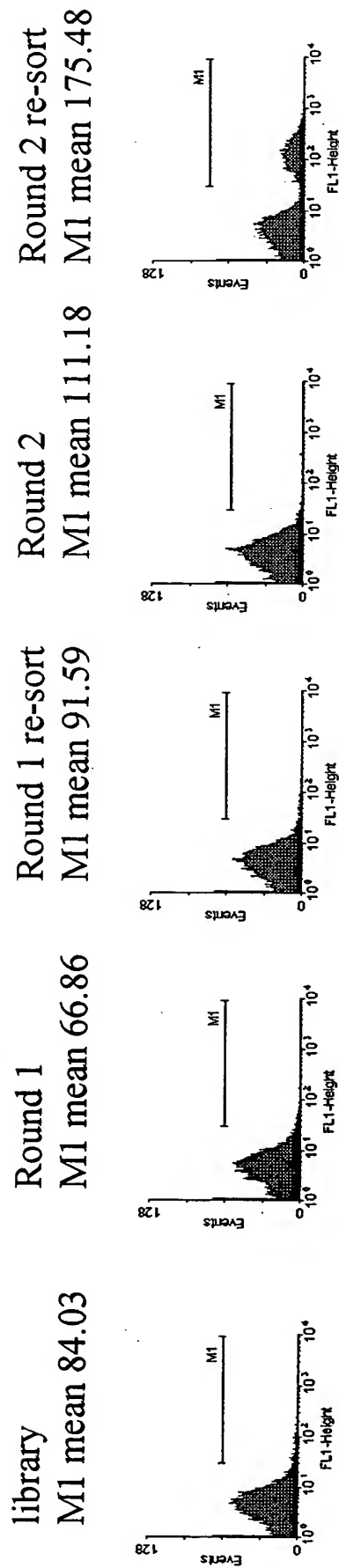
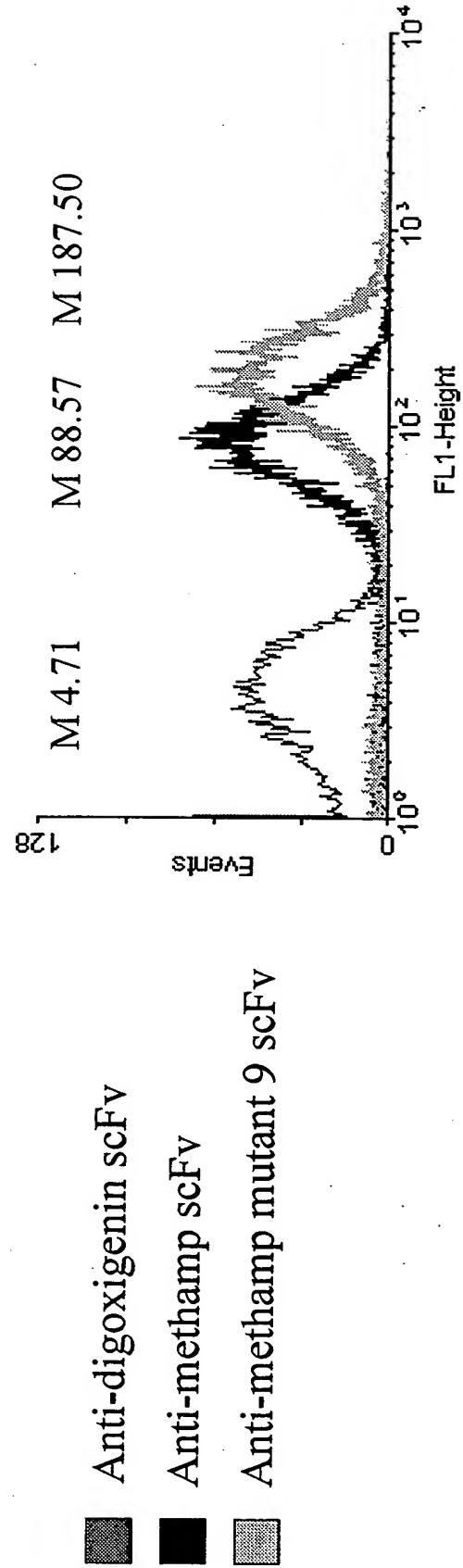
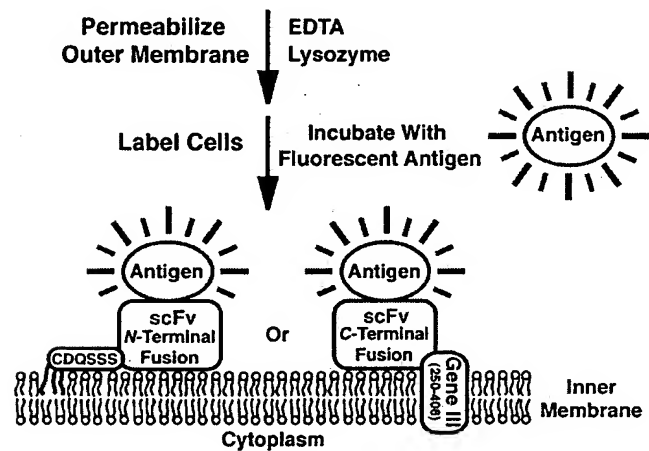
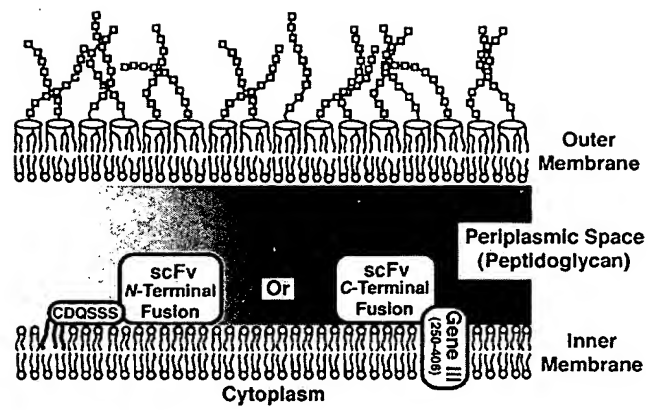
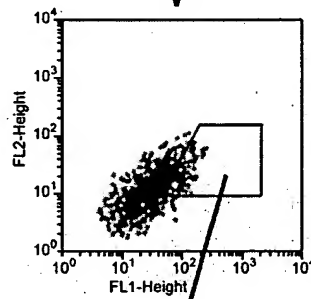


FIG. 5 Methamphetamine -FL 200nM label





Isolate Affinity Enhanced scFvs



Recover scFv Genes

PCR



FIG. 6

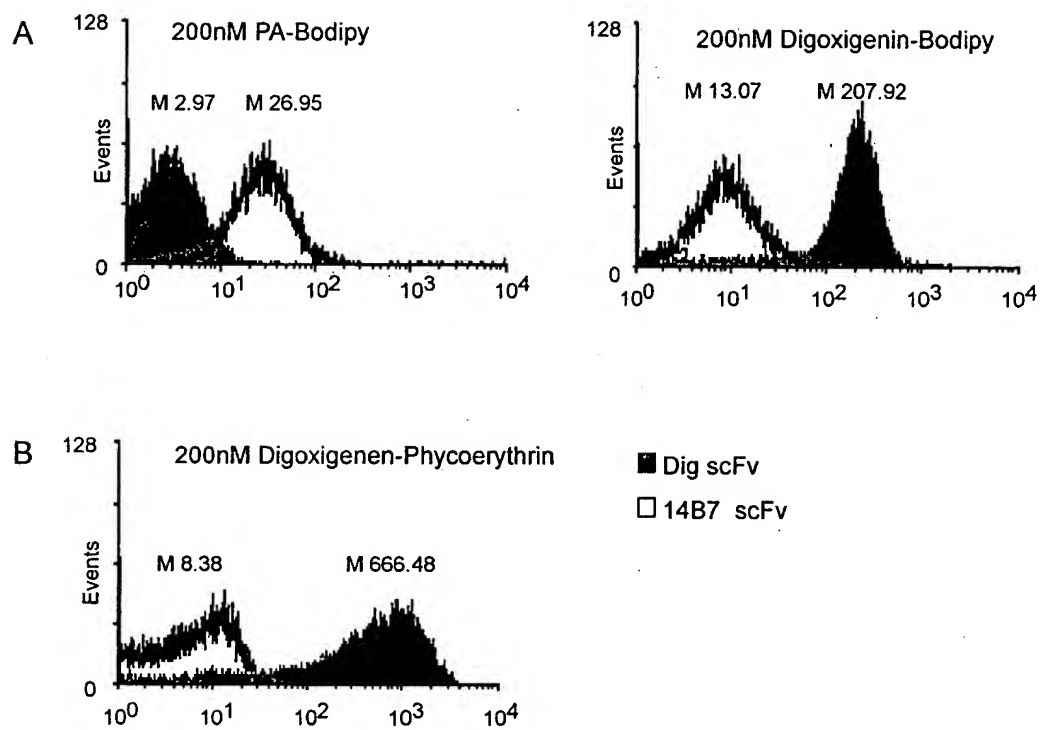


FIG. 7A, B

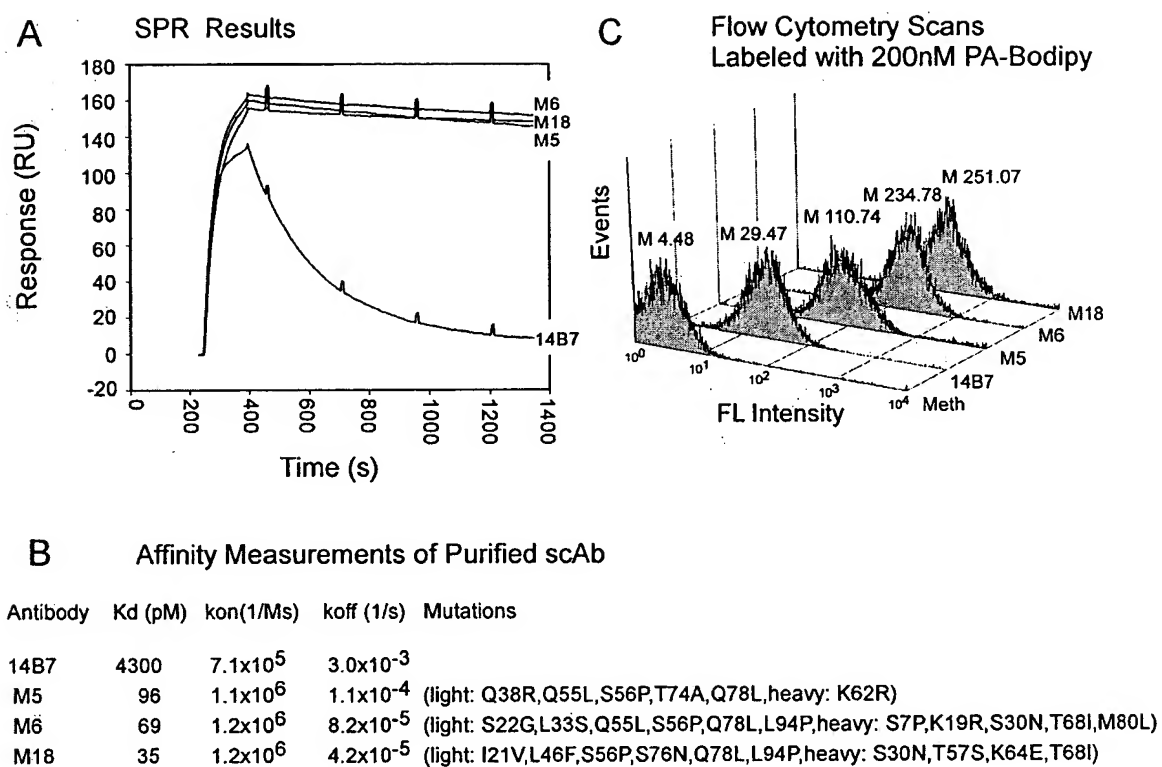
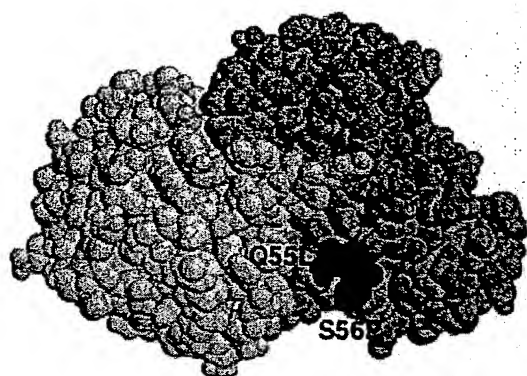


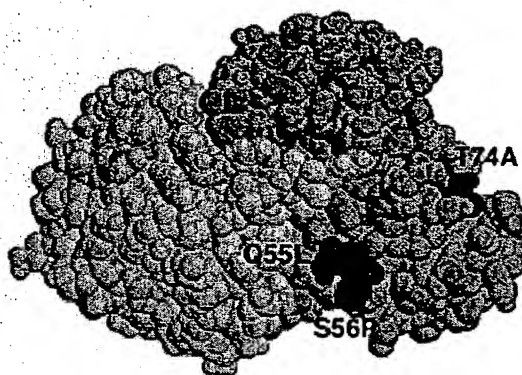
FIG. 8A-C



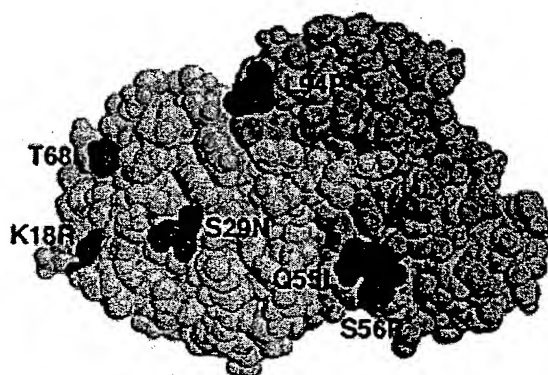




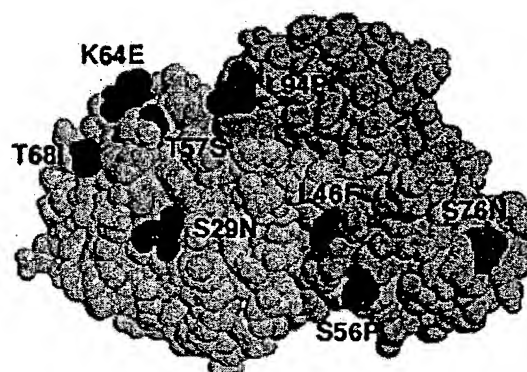
**1H  $K_D = 260$  pM**



**M5  $K_D = 96$  pM**



**M6  $K_D = 69$  pM**



**M18  $K_D = 35$  pM**

**FIG. 10**

	Variable Light
14B7scFv	DIQMTQTSSLSASLGDRVTISCRASQDIRNYLNWYQQKPDGTVKLLIYYTSRLQSGVPSRFSGSGSDYSLTISNQEDEDIGTYFCQQGNTLPWTFGGGKLEIKR
M18scFv	DIQMTQTSSLSASLGDRVTISCRASQDIRNYLNWYQQKPDGTVKFLIYYTSRLQPGVPSRFSGSGSDYSLTINNLEQEDIGTYFCQQGNTPPWTFGGGKLEIKR
	Linker
14B7scFv	GGGGSGGGSGGGSGGGGS
M18scFv	GGGSDGGGSGGGSGGGGS
	Variable Heavy
14B7scFv	EVQLQQSGPELVKPGASVKISCKDSGYAFSSSWMNWVKQRPQGQLEWIGRIYPGDGDTNNGKFKGKATLTADKSSSTAYMQLSSLTSVDSAVYFCARSGLLRyAMDYWGQGTSTVTVSS
M18scFv	EVQLQQSGPELVKPGASVKISCKDGYAFNFSWMNWKQRPQGQLEWIGRIYPGDGDSNNGKFEGKALTADKSSSTAYMQLSSLTSVDSAVYFCARSGLLRyAMDYWGQGTSTVTVSS

FIG. 11